

Amendment and Response Under 37 C.F.R. §1.116 - Expedited Examining Procedure

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Serial No.: 09/762,224

Confirmation No.: 2859

Filed: 30 July 2001 (35 USC §371)

For: PSEUDOTYPED RETROVIRUSES AND STABLE CELL LINES FOR THEIR PRODUCTIONAmendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

Listing of Claims

1. (Currently Amended) A pseudotyped-retrovirus-producing eukaryotic cell, comprising a eukaryotic cell including nucleotide sequences operatively encoding components of a pseudotyped retrovirus, said nucleotide sequences comprising:

(a) a first nucleotide sequence operably encoding a retroviral Gag polypeptide;

(b) a second nucleotide sequence operably encoding a retroviral Pro polypeptide;

(c) a third nucleotide sequence operably encoding a retroviral Pol polypeptide; and

(d) a fourth nucleotide sequence operably encoding at least two different Ross River alphaviral ~~virat~~ glycoproteins[.];

wherein the retroviral Gag, Pol and Pro polypeptides are Moloney murine leukemia polypeptides.

2. (Previously presented) The cell of claim 1, wherein said cell further comprises a fifth nucleotide sequence having a 5' and a 3' end, said fifth nucleotide sequence encoding a selected protein, said fifth nucleotide sequence operably linked at said 5' end to a first retroviral long terminal repeat sequence and operably linked at said 3' end to a second retroviral long terminal repeat sequence.

3. (Previously presented) The cell of claim 2, wherein said selected protein is a marker.

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4. (Original) The cell of claim 3, wherein said marker is a fluorescent protein.

5 - 7. (Canceled)

5 8. (Original) The cell of claim 1, wherein said eukaryotic cell is a mammalian cell.

6 9. (Original) The cell of claim 8, wherein said mammalian cell is a human cell.

10. (Canceled)

7 11. (Currently amended) The cell of claim 1, wherein said cell produces a pseudotyped retrovirus having a lipid bilayer. said Ross River alphaviral viral glycoproteins disposed in said lipid bilayer.

8 12. (Original) The cell of claim 1, wherein said first, second, third and fourth nucleotide sequences are chromosomally-integrated.

13 - 18. (Canceled)

9 19. (Currently Amended) A method of modifying a eukaryotic cell to prepare a pseudotyped-retrovirus-producing eukaryotic cell, said method comprising:

transfecting a eukaryotic cell with a first nucleotide sequence operably encoding a retroviral Gag polypeptide, a second nucleotide sequence operably encoding a retroviral Pro polypeptide, a third nucleotide sequence operably encoding a retroviral Pol polypeptide and a fourth nucleotide sequence operably encoding at least two different Ross River alphaviral viral glycoproteins[.];

wherein the retroviral Gag, Pol and Pro polypeptides are Moloney murine leukemia polypeptides.

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¹⁰ ~~20~~. (Original) The method of claim 19, wherein said first, second and third nucleotide sequences are operably linked to a promoter sequence.

²³
21 - ~~22~~. (Cancelled)

⁹
~~11~~ ²⁴. (Original) The method of claim ~~19~~, wherein said first, second, third and fourth nucleotide sequences are chromosomally-integrated.

⁹
~~12~~ ²⁵. (Previously presented) The method of claim ~~19~~, wherein said cell further comprises a fifth nucleotide sequence having a 5' end and a 3' end, said fifth nucleotide sequence encoding a selected protein, said fifth nucleotide sequence operably linked at said 5' end to a first retroviral long terminal repeat sequence and operably linked at said 3' end to a second retroviral long terminal repeat sequence.

¹³ ~~26~~. (Currently amended) A method of modifying a eukaryotic cell to prepare a pseudotyped-retrovirus-producing eukaryotic cell, said method comprising:

(a) transfecting a eukaryotic cell with a vector including a first nucleotide sequence encoding a retroviral Gag polypeptide, a second nucleotide sequence encoding a retroviral Pro polypeptide and a third nucleotide sequence encoding a retroviral Pol polypeptide, said first, second and third nucleotide sequences operably linked to a first promoter sequence, wherein the retroviral Gag, Pol and Pro polypeptides are Moloney murine leukemia polypeptides; and

(b) transfecting said cell with a fourth nucleotide sequence encoding at least two Ross River alphaviral viral glycoproteins, said fourth nucleotide sequence operably linked to a second promoter sequence.

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¹³
14 ~~21~~. (Previously presented) The method of claim ~~26~~¹³, said method further comprising transfecting said cell with a vector including a fifth nucleotide sequence having a 5' and a 3' end, said fifth nucleotide sequence encoding a selected protein, said fifth nucleotide sequence operably linked at said 5' end to a first retroviral long terminal repeat sequence and operably linked at said 3' end to a second retroviral long terminal repeat sequence.

¹³
15 ~~28~~. (Previously presented) The method of claim ~~26~~¹³, wherein said selected protein is a marker.

¹³
16 ~~29~~. (Original) The method of claim ~~26~~¹³, wherein said first, second, third and fourth nucleotide sequences are chromosomally-integrated.

30 - 32. (Canceled)

17 ~~33~~. (Currently amended) A pseudotyped retrovirus, comprising:
(a) a ~~retroviral~~ Moloney murine leukemia virus capsid;
(b) a lipid bilayer, said lipid bilayer surrounding said ~~retroviral~~ Moloney murine leukemia virus capsid; and
(c) at least two different Ross River alphaviral ~~viral~~ glycoproteins disposed in said lipid bilayer.

¹⁷
18 ~~34~~. (Previously presented) The retrovirus of claim ~~33~~¹⁷, said retrovirus further comprising a nucleotide sequence encoding a selected protein, said nucleotide sequence enclosed within said retroviral capsid.

35 - 39. (Canceled)

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19 40. (Currently amended) A method of introducing a selected nucleotide sequence into a cell comprising transducing a cell with a pseudotyped retrovirus, said pseudotyped retrovirus comprising:

a selected nucleotide sequence;

a retroviral Moloney murine leukemia virus capsid;

a lipid bilayer surrounding said retroviral Moloney murine leukemia virus capsid; and

at least two different Ross River alphaviral viral glycoproteins disposed in said lipid bilayer;

wherein said cell is permissive for entry of a pseudotyped retrovirus having at least two different Ross River alphaviral viral glycoproteins in its lipid bilayer.

41 - 52. (Canceled)

20 53. (Currently amended) A kit for modifying a eukaryotic cell to prepare a pseudotyped-retrovirus-producing eukaryotic cell, said kit comprising:

(a) a first nucleotide sequence operably encoding a retroviral Gag polypeptide;

(b) a second nucleotide sequence operably encoding a retroviral Pro polypeptide;

(c) a third nucleotide sequence operably encoding a retroviral Pol polypeptide, wherein the retroviral Gag, Pol and Pro polypeptides are Moloney murine leukemia polypeptides; and

(d) a fourth nucleotide sequence operably encoding at least two different Ross River alphaviral viral glycoproteins; and

(e) means for transfecting a eukaryotic cell with said first, second, third, and fourth nucleotide sequences.

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54 - 55. (Canceled)

21 ⁹ 56. (Previously presented) The method of claim ~~19~~, wherein the first, second, third, and fourth nucleotide sequences are provided on plasmid vectors.

22 ²¹ 57. (Previously presented) The method of claim ~~56~~, wherein the first, second, and third nucleotide sequences are contiguous on a single plasmid vector.

23 ²² 58. (Previously presented) The method of claim ~~57~~, wherein the fourth nucleotide sequence is on a different plasmid vector.